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ABSTRACT

This document describes a learning modules review process implemented at Governors State University. The review process was designed to: (1) assess the relevance of each learning module to instructional program needs; (2) enhance the quality of the content of each learning module; (3) improve the effectiveness of competencies and instructional objectives as devices for communicating ideas to students; (4) assure the quality and internal consistency of competencies, student work, and evaluation; (5) increase the likelihood of equitability among different learning modules in the amount of work required of students for the credit granted; (6) aid in the development of learning module components; and (7) enhance the professional development of all faculty members. (MJM)

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The Competency-based Curriculum: Collegial Review of Learning Modules at Governors State University

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Introduction

One of the unique characteristics of Governors State University is its commitment to competency-based instruction. This is clearly indicated in the University's Educational Planning Guidelines[1] and in numerous other documents prepared by the faculty.[2,3] In a competency-based instructional system, certain assumptions are fundamental including:

1. Competencies expected of students completing program elements can be described in functional terms.
2. Instructional procedures can be designed and implemented that will effectively aid students in attaining these competencies.
3. Achievement of competencies can be directly or indirectly measured and verified with a reasonable degree of accuracy.

As a means of implementing a competency-based instructional system, the planning staff at Governors State University defined learning modules as the primary instructional element, similar to courses at other institutions. However, there are several differences between a course and a learning module; among the most significant are the following:

1. Learning modules are usually interdisciplinary in content.
2. Learning modules are usually "team taught" by two or more professors.
3. Learning modules ideally indicate alternative means by which students can achieve competencies.
4. Learning modules are usually self-paced; that is, students can work at their own rate, imposing their own deadlines.
5. Written descriptions of learning modules are prepared prior to offering and are available to students as guides to study and work. The descriptions contain several elements including
   - -- a rationale which describes the relevance of the learning module to competencies expected of graduates from specific programs and to the "world" outside the university;
   - -- a statement of competencies that students will attain by completing the learning module;
   - -- a list of instructional objectives that contribute to these competencies;

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[1] Educational Planning Guidelines Park Forest South, Illinois: Governors State University, Undated.

[2] Wartgow, J., et al, An Instructional Systems Paradigm for Governors State University, Park Forest South, Illinois: Governors State University, 1973.

[3] Position Papers 2,3,4,7,9 prepared by the faculty of the College of Environmental and Applied Sciences of Governors State University detail the philosophy and procedures of implementing competency-based instruction at the senior college level.

-- a pre-assessment, which helps students determine if they have the essential prerequisites for the learning module, or if they have already attained the competencies and thus do not need to enroll in the learning module;

-- assignments and tasks that are designed to help students achieve competencies;

-- resources needed to complete assignments and tasks; and

-- criteria that will be used in verifying achievement of competencies.

6. Professors can initiate a learning module without prior approval of faculty, administrators or a curriculum review committee. This is to enhance faculty members' freedom and creativity by not putting obstacles in the path of innovation.

Each of the characteristics of learning modules, especially the last listed, necessitates a system for learning module review that is different from course approval procedures found in most universities. Such a system should be constructive in its outcomes and enhance the quality of each learning module. Moreover, it should allow for appraisal of the relevance of learning modules to university, collegial and program objectives and to students' personal and professional needs. The review process should foster examination of the quality and internal consistency of learning module components and it should help to assure reasonable equitability in the amount of work required for each unit of credit granted. Finally, the review process should result in improved instruction and increased professional growth for all faculty members. A system of learning module review meeting these qualifications has been designed and implemented. It is described below.

The Review Process

The purposes of learning module review are:

1. to assess the relevance of each learning module to instructional program needs;
2. to enhance the quality of the content of each learning module;
3. to improve the effectiveness of competencies and instructional objectives as devices for communicating ideas to students;

4. to assure the quality and internal consistency of competencies, student work, and evaluation;
5. to increase the likelihood of equitability among different learning modules in the amount of work required of students for the credit granted;
6. to aid in the development of learning module components; and
7. to enhance the professional development of all faculty members.

In the review process, data are obtained from at least five sources:
Professional peers within the college are best able to assess the revelance of learning modules to instructional program needs. They also may be able to address the quality of content and provide a judgment on the "work/credit ratio." Thus, this group will evaluate learning modules from a perspective of relevance and quality of subject matter.
Instructional development specialists are best able to judge the instructional soundness of learning modules. Thus, they will review the competencies, assignments, evaluative mechanisms and other components of learning modules from a perspective of seeking ways of improving instructional effectiveness.
Professional peers in other institutions if carefully chosen, will bring expertise and perspectives beyond that possessed by collegial faculty members to the appraisal of learning module content and organization. External reviewers also will provide additional input on internal consistency of module components and "work/credit ratio." Thus, peers outside the college review learning modules primarily from the perspective of content expertise, augmenting that which exists intramurally.
Students make judgments on learning modules from the consumers' perspective. They assess the organization, quality and relevance of content, effectiveness as aids in achieving competencies, and "work/credit ratio."
Registrar's records on students completion rates in conjunction with other data, provide information of value in improving learning modules and their delivery. Since self-pacing of instruction is one mechanism for individualization at Governors State University, student completion rates may be

related to learning module organization. That is, if learning modules are poorly organized, or require excessive work, students' progress may be impeded unnecessarily. On the other hand, if evaluation mechanisms are not appropriately defined, students may obtain credit for competencies they have not achieved. Thus, completion rates provide clues regarding instructional quality when used in conjunction with data from other sources.

Internal review by professional peers and instructional development specialists is designed to occur during the second offering of each learning module and thereafter on each third offering, or every two years for infrequent offerings. The learning modules descriptions and any supporting materials supplied by the professor are given to appropriate subject matter specialists and to instructional development staff members along with a Learning Module Review Form (Appendix I). Learning modules are usually reviewed internally by at least two individuals from each of these groups, using the criteria specified on the form. The results of the review are compiled by the College's Coordinator of Curriculum and Instruction who assigns an Instructional Development Specialist the responsibility of (a) providing the professor feedback from the review and (b) working with the professor to define and implement appropriate actions to improve the learning module.

Students routinely evaluate instruction at the end of each eight week session using the Student Evaluation of Instruction Form (Appendix II). Data from these evaluations and those from the Registrar's records on student completion rates are provided to individual faculty members along with collegial averages. Each professor can evaluate data on completion rates and students' perceptions of content, organization and delivery of the learning module and use these data in improving both module design and delivery techniques.

External review is scheduled to occur during the third offering of the learning module, after the professor has incorporated data from internal review and student evaluations. The professor and the College's Coordinator of Curriculum

and Instruction mutually agree upon an external reviewer who has appropriate subject matter expertise and concern about instruction to provide a meaningful review. The external reviewer is sent a copy of the learning module and any supporting materials along with a statement about the nature of the College, its students and the instructional program of which the module is a part and the criteria to be used in reviewing the learning module. Although these criteria may vary somewhat depending on the learning module and instructional program, the following serve as guidelines:

1. Does the content of the learning module represent valid, contemporary thinking about the subject?
2. Is the content well conceptualized?
3. Is the content organized in a way that is meaningful for the intended student population?
4. Does the learning module present significant alternative points of view regarding the subject matter?
5. Are the learning module competencies important ones for students to acquire?
6. Does the learning module represent an efficient and effective means of achieving the competencies?
7. Is the work required consonant with the amount of credit given?

Results

The system for learning module review is nearing full operational status in the College of Environmental and Applied Sciences, one of the University's four Colleges. Internal review was initiated in the Summer of 1973. Approximately forty learning modules have been reviewed during the past eight months. Student evaluation of instruction and reporting of student completion rates were routinized during the Autumn of 1973. The procedures for external review have not been fully resolved, and, at this time, only a few learning modules have been critically reviewed by professional peers outside of the College.

Review by professional peers within the College has been of limited effectiveness. Because the faculty is small, there is usually only one "expert" in a

subject specialty. Others in the same instructional program have their own specialty; thus, because of faculty size, there is less critical review and analysis of content and its organization than was anticipated. Also some faculty members may be reluctant to critize their co-workers' learning modules in any manner including relevance to program goals. As external review is expanded, these limitations of peer review will be minimized; internally, however, professional peers need assume more responsibility for monitoring efficient and effective instructional delivery by helping to improve or eliminate irrelevant and poorly conceptualized offerings.

Review by instructional development specialists, on the other hand, has been highly productive of useful information. Faculty members' awareness and skills have been upgraded in writing competency statements, instructional objectives, assignments and evaluation schemes, in improving evaluation procedures and in planning for instruction. However, much additional work needs to be done especially in developing the means for measuring and verifying student achievement of competencies.

Data from external review have been significant. Individuals outside the College bring fresh perspectives on content and its organization. The power of external review in improving instruction and aiding professional growth will be more fully appreciated during the coming months.

The effects of data from student evaluation of instruction and from module completion rates can only be speculated upon at this time. It is hypothesized that these data will have greater impact as a cumulative pattern emerges over successive sessions. That is, as a faculty member learns about students' reactions to his/her instructional efforts and couples this information with data on completion rates, some serious self-assessment and, hopefully, improvement in instructional planning and delivery will occur. Moreover, as data are assembled from each of the five sources their total effect will be profound.

Perhaps the two most significant results are that the review process generally is accepted by faculty members and that it tends to help them engage in ongoing discussion and reflection about organizing knowledge and instruction. Because each learning module undergoes review by students everytime it is offered, and periodically by peers if it is offered more than once, the review process is an ever-present reminder that instruction is a major responsibility at Governors State University, that faculty members are accountable for it and that all have an obligation to work toward its continued improvement.

* * * * *

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JJG:jmm
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Appendix I

EAS LEARNING MODULE REVIEW FORM

Module Title _____

Coordinator(s) _____

Assistant(s) _____

Units of Credit _____ Session Reviewed _____

Program _____ Area of Emphasis _____

PART I - TASK FORCE REVIEW

A. Relevance to Instructional Program

1. Is the proposed Module significant:

a. to the Instructional Program? Yes ___, No ___, To some degree ___

b. to specific competencies for the Area of Emphasis or Orientation?
Yes ___, No ___, To some degree ___

c. to other external criteria of significance to students?
Yes ___, No ___, To some degree ___
If "yes" to (c) specify source of external criteria _____

_____

Comments:

2. In the Judgment of the Task Force members, this Module relates to the following Areas of Emphasis and Orientations to the degree specified:

Area of Emphasis or Orientation	(Check One)
_____	Significantly____, Somewhat____
_____	Significantly____, Somewhat____
_____	Significantly____, Somewhat____
_____	Significantly____, Somewhat____

B. Quality of Content

1. Is at least one of the reviewers competent to judge the quality of the content of this Module? Yes___, No___, To some degree___

2. In the judgment of the reviewers, is the content of this Module:

   a. valid, representing the best contemporary thinking?
   Acceptable___,Acceptable but could be improved___,Needs improvement___

   b. well conceptualized?
   Acceptable___,Acceptable but could be improved___,Needs improvement___

   c. structured in a way that will be meaningful to students?
   Acceptable___,Acceptable but could be improved___,Needs improvement___

   d. representative of significant alternative points of view?
   Acceptable___,Acceptable but could be improved___,Needs improvement___

   Comments:

C. Work/Credit Ratio

1. In the judgment of the reviewers, the amount of work required of students for credit given is about right___, too much work___, too little work,___

Comments:

Reviewers_____

_____Date_____

PART II - INSTRUCTIONAL DESIGN TEAM REVIEW

A. Module Components Checklist	Acceptable	Needs Improvement	Not Included
Title			
Coordinator(s)			
Assistant(s)			
Credit			
Availability by Session			
Rationale			
Competencies			
Pre-assessment			
Topics			
Suggested Work			
Evaluation			
Resources			

Comments:

B. Pre-assessment

1. Is the student's command of prerequisite knowledge and skills measured?

   Yes ___, No ___, To some degree ___

2. Are pre-assessment data used to prescribe instruction for individual students?

   Yes ___, No ___, To some degree ___

   Comments:

B. Competencies

1. Are the competencies appropriate for use on transcripts?

   Yes___, Need improvement___

2. Do the competencies describe desired outcomes of Module clearly?

   Yes___, Need improvement___

3. Are the competencies consistent with the title and rationale?

   Yes___, Need improvement___

4. Complete competency grid below (description of criteria in Appendix II).

Mark an "X" where you feel there is congruence between the Objective and the Behaviors Listed

STUDENT BEHAVIORS (PERFORMANCE CHARACTERISTICS)*	Competency Number									
	1	2	3	4	5	6	7	8	9	10
Knowledge and Comprehension										
Application of Scientific Knowledge and Methods										
Manual Skills										
Attitudes and Interests										
Orientation										
Processes of Scientific Inquiry I: Observing and Measuring										
Processes of Scientific Inquiry II: Seeing a Problem and Seeking Ways to Solve It										
Processes of Scientific Inquiry III: Interpreting Data and Formulating Generalizations										
Processes of Scientific Inquiry IV: Building, Testing, and Revising a Theoretical Model										

* Categories adapted from L. E. Klopfer "Evaluation of Learning in Science," Handbook on Formative & Summative Evaluation of Student Learning (B. Bloom, J. T. Hastings, G. Madaus eds). New York: McGraw-Hill, 1971

C. Suggested Work

1. Is the work required of the student clearly described?
   Acceptable___, Acceptable but could be improved___, Needs improvement___
2. Is the work required of the student relevant to the Module's competencies?
   Acceptable___, Acceptable but could be improved___, Needs improvement___
3. Is the work required of the student commensurate with the credit given?
   Yes___, Too much work___, Too little work___
4. Does the work required of the student represent a reasonably efficient way of achieving the objectives?
   Acceptable___, Acceptable but could be improved___, Needs improvement___
5. Is the work consistent with evaluative criteria?
   Acceptable___, Acceptable but could be improved___, Needs improvement___

Comments:

D. Evaluation

1. Are evaluation processes and criteria clearly described?
   Acceptable___, Acceptable but could be improved___, Needs improvement___
2. Is the evaluation consistent with the competencies?
   Acceptable___, Acceptable but could be improved___, Needs improvement___
3. Does evaluation allow for feedback to students as they progress through the Module?
   Acceptable___, Acceptable but could be improved___, Needs improvement___
4. Can success on the evaluation be shown to be directly related to competencies of the program, Area of Emphasis or Orientation?
   Yes___, No___, To some degree___

Comments:

Reviewers _____

_____ Date _____

Appendix II

GOVERNORS STATE UNIVERSITY STUDENT EVALUATION OF INSTRUCTION

GOVERNORS STATE UNIVERSITY

STUDENT EVALUATION OF INSTRUCTION

Module Number ○○○○ Session ○○ Year: 19○○

The results of this side of the form will be available to the Coordinators(s), the College Dean, and other appropriate personnel to be used to improve the quality of instruction in the University, and will serve as input into decisions regarding salary and retention.

KEY

StA = Strongly Agree	SoD = Somewhat Disagree
A = Agree	D = Disagree
SoA = Somewhat Agree	StD = Strongly Disagree
NA = Not Applicable	

PLEASE MARK ONE RESPONSE OPTION FOR EACH STATEMENT. IF THE STATEMENT DOES NOT APPLY, MARK "NOT APPLICABLE."

	StA	A	SoA	SoD	D	StD	NA
1. The instructional objectives for the module were clear . . .	0	0	0	0	0	0	0
2. Consistent with the objectives, I had an opportunity to pursue individual interests	0	0	0	0	0	0	0
3. In-class time was used effectively	0	0	0	0	0	0	0
4. The students were exposed to contrasting viewpoints on issues studied in the module	0	0	0	0	0	0	0
5. Instructional activity was consistent with the stated instructional objectives	0	0	0	0	0	0	0
6. The coordinator(s) has command of the subject matter of the module	0	0	0	0	0	0	0
7. I was able to arrange for personal consultation and assistance from the coordinator(s) as needed	0	0	0	0	0	0	0
8. Evaluation was consistent with the stated instructional objectives	0	0	0	0	0	0	0
9. Student inquiries were encouraged	0	0	0	0	0	0	0
10. The learning experiences in this module were interesting and stimulating	0	0	0	0	0	0	0

Compared to all college-level instructors you have had, how effective has this coordinator (have these coordinators) been in this module?

	One of the Most Effective (Top 10%)	More Effective Than Most (Among Top 30%)	About Average	Not as Effective as Most (In Lowest 30%)	One of the Least Effective (Lowest 10%)
11-1	☐	☐	☐	☐	☐
*11-2	☐	☐	☐	☐	☐
*11-3	☐	☐	☐	☐	☐

*If more than one coordinator participated in the conduct of this learning module, mark the appropriate response according to supplementary instructions provided by coordinator.

(OVER)

This side of the SEI Form is designed for the exclusive use of the Coordinator(s) in improving instruction.

COORDINATOR OPTION QUESTIONS. If the coordinator(s) provided supplementary questions, use this section for responding.

	A	B	C	D	E	F	G
12.	0	0	0	0	0	0	0
13.	0	0	0	0	0	0	0
14.	0	0	0	0	0	0	0
15.	0	0	0	0	0	0	0
16.	0	0	0	0	0	0	0

	A	B	C	D	E	F	G
17.	0	0	0	0	0	0	0
18.	0	0	0	0	0	0	0
19.	0	0	0	0	0	0	0
20.	0	0	0	0	0	0	0
21.	0	0	0	0	0	0	0

STUDENTS COMMENT SECTION: One way in which coordinators can improve their modules is through thoughtful student reactions. If you have any comments to make concerning the coordinator(s) or module, please write them in the space provided below. If you need additional space, use a separate sheet of paper.

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